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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/603,885	06/26/2000	Stephen William Watson Michnick	Oddy 004	2144

7590 04/16/2004

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EXAMINER	
PONNALURI, PADMASHRI	
ART UNIT	**PAPER NUMBER**
1639	

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/603,885	MICHNICK ET AL.	
	Examiner	Art Unit	
	Padmashri Ponnaluri	1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4 and 18-33* is/are pending in the application.

4a) Of the above claim(s) 20 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4 and 18-~~33~~ 21-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 June 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/017,412.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/21/04 has been entered.

Status of Claims

2. Claims 1, 3-4, 18-33 are currently pending in this application.

3. Claim 20 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species (elected DHFR as the reporter molecule), there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 11 filed on 9/16/02.

4. Claims 1, 3-4, 18-19, 21-33 are currently being examined in this application.

Priority

5. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

The Oath/Declaration does not include the priority application 09/017,412 and the priority Canada Application 2196496.

The instant claims 1, 3-4 and 18-19, 21-24, 31-32 recite '*a method for identifying an interacting set of molecules comprising: contacting first protein fragments, second protein fragments to panel of molecules, and mixing the resulting products, and testing for protein*

activity and identifying the panel members whose interaction result in said activity' which were not disclosed in the parent application 09/017,412. The 09/017,412 application does not disclose method for identifying protein interactions with panel or library of molecules, the 09/017,412 discloses the interaction between DHFR and Leucine Zipper fragments. In a continuation-in-part application, only claims directed solely subject matter adequately disclosed under 35 USC 112, first paragraph in the parent application is entitled to the benefit of the filing date of the parent application. Thus, the instant claims 1, 3-4 and 18-19, 21-24, 31-32 recite features not disclosed in the parent applications are entitled only to the filing date of the continuation-in-part application. See MPEP 201.22.

6. The filing date of the instant claimed invention of claims 1, 3-4 and 18-19, 21-24, 31-32, is determined as the filing date of the provisional application 60/141,210, 06/26/1999.

7. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification of in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

Information Disclosure Statement

8. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be

incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Oath/Declaration

9. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

> The oath or declaration is defective because:
> a) It does not identify the priority parent application 09/017,412.
> b) It does not identify the foreign application for patent or inventor's certificate on which priority is claimed pursuant to 37 CFR 1.55, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month and year of its filing.

10. This application presents a claim for subject matter not originally claimed or embraced in the statement of the invention. Applicants amended the priority of this application as CIP of 09/017,412. A supplemental oath or declaration is required under 37 CFR 1.67. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02.

Drawings

11. Applicant is invited to notice that boxes 10 and 12 were checked by the draftsman in PTO 948, attached to the office action mailed on 12/2/02. If applicants renumber the figures, applicants are encouraged to amend the specification so that the description of renumbered figures corresponds to the renumbered figures.

Claim Rejections - 35 USC § 112

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. Claims 1, 3-4, 18-19, 21-24, and 31-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a written description rejection.

The instant claims briefly recite 'a method for identifying an interacting set of molecules comprising: a) generating a first protein fragments and second protein fragments of a protein reporter molecule; b) coupling the first protein fragments to members of a first panel of molecules; c) coupling the second protein fragments to members of a second panel of molecules; d) mixing b) and c); e) testing for reconstitution of said activity when said protein fragments are associated; f) identifying the panel members whose interaction resulted in said activity.'

To satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention.

Applicant's claims are directed to the use of 'protein fragments of a protein reporter molecule, panel of molecules' of which the specification has not disclosed a clear definition or relationship of these terms. The specification discloses **no** examples of the preparation and use

of 'protein fragments, panel of molecules.' The use of 'protein fragments of a protein reporter molecule, and panel of molecules' in the claimed method for identifying an interacting set of molecules is not adequately described the instant specification. The specification discloses *library-v-library* screening in intact cells for murine dihydrofolate reductase (mDHFR) (refers to the reporter molecules of the instant claims) and GCN4 Leucine Zipper forming peptides (refers to the panel of molecules) (i.e., see page 3 of the specification). The relationship between the GCN4 leucine zipper forming peptides and DHFR was well known. The specification has not disclosed examples or guidance on how to select different panel members or the reporter molecules to practice the claimed invention. Further the specification has not disclosed interacting set of molecules identified using the claimed method except the DHFR and Leucine Zipper fragments. Applicant's claimed scope represents only an invitation to experiment.

With respect to adequate disclosure of the scope of the presently claimed generic applicant is referred to the discussion in *University of California v. Eli Lilly and Co.* (U.S. Court of Appeals Federal Circuit (CAFC) 43 USPQ2d 1398 7/22/1997 Decided July 22, 1997; No. 96-1175) regarding disclosure. For adequate disclosure, like enablement, requires representative examples, which provide reasonable assurance to one skilled in the art that the compounds falling within the scope both possess the alleged utility and additionally demonstrate that applicant had possession of the full scope of the claimed invention. See *In re Riat* (CCPA 1964) 327 F2d 685, 140 USPQ 471; *In re Barr_* (CCPA 1971) 444 F 2d 349, 151 USPQ 724 (for enablement) and *University of California v. Eli Lilly and Co* cited above (for disclosure). The more unpredictable the art the greater the showing required (e.g. by "representative examples") for both enablement and adequate disclosure.

The disclosure is neither representative of the claimed genus, nor does it represent a substantial portion of the claimed genus.

Although directed to DNA compounds, this holding would be deemed to be applicable to any compound or methods; which requires a representative sample of compounds and/or a showing of sufficient identifying characteristics; to demonstrate possession of the claimed generic(s). In the present instance, the claimed invention contains no identifying characteristics regarding the protein fragments or the panel of molecules or the interacting set identified using the claimed method. Additionally, the narrow scope of examples directed to specific 'DHFR and GCN4 Leucine Zipper forming peptides' are clearly not representative of the scope of the presently claimed invention. Moreover, the claimed genus (protein fragments or the panel of molecules) encompasses members, which are yet to be prepared or envisioned. This further evidences that instant disclosure does not constitute support for the claimed genus or a substantial portion thereof.

14. Claims 1, 3-4, 18-19, 21-24, and 31-32 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the use of DHFR as reporter molecule and Leucine zipper forming peptides as panel of molecules, does not reasonably provide enablement for any other reporter molecules and any other molecules as panel of molecules. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The instant claims briefly recite 'a method for identifying an interacting set of molecules

comprising: a) generating a first protein fragments and second protein fragments of a protein reporter molecule; b) coupling the first protein fragments to members of a first panel of molecules; c) coupling the second protein fragments to members of a second panel of molecules; d) mixing b) and c); e) testing for reconstitution of said activity when said protein fragments are associated; f) identifying the panel members whose interaction resulted in said activity.

The specification discloses a library versus library screening in intact cells based on the folding of murine enzyme DHFR. The specification discloses that the method is useful in investigating selection of dimerizing leucine zipper pairs from two designed semi-randomized libraries. The disclosure does not teach the use of any other enzymes or interacting panel members commensurate in scope with the claimed method, which may include any type of reporter and library of panel of molecules. The claimed method does not appear to be within the scope of reasonable experimentation.

The factors to be considered in a determination of undue experimentation are set forth in *In re Wands*, (U.S.P.Q. 2d 1400 (CAFC 1988). The factors to be considered include: the quantity of experimentation necessary, the amount of direction or guidance presented, the presence or absence of working examples, the nature of the invention, the state of the prior art, the predictability of the art and the breadth of the claims.

1) The specification fails to give adequate direction and guidance for use of any other proteins and library members in the claimed method. The specification uses mDHFR as reporter enzyme, which is relatively small and monomeric and structural and functional information of the DHFR and as well as interaction with the leucine Zipper protein is well known in the art. The specification does not sufficiently teach how to choose the protein and the library of molecules to

practice the claimed method. The specification only teaches that the panel of molecules is randomized libraries of leucine zipper pair. The specification does not teach the use of two different panel of molecules which are not structurally or functionally related.

In light of the foregoing, the specification does not sufficiently teach the claimed methods for identifying interacting set of molecules.

2) The specification fails to provide working examples of the preparation of libraries or panels of molecules other than the leucine zipper pairs. The specification examples are drawn to the use of mDHFR fragments and randomized leucine zipper pair molecules as panel of molecules in the method of identifying interaction between the molecules. However, the instant claimed method recites the use of fragments of any reporter molecule, which has detectable activity when associated, and two panels of molecules.

3) The breadth of the claims encompasses use of any number of reporter compounds and libraries as interacting set. The claims encompass the use numerous reporter molecules , however the specification no where discloses the relationship between the reporter molecules and the panel members. That is from the specification disclosure of the use of mDHFR as reporter and leucine zipper molecules as panel of molecules, it is clear that the reporter and the panel of molecules are known to have some kind of interactions or related. However, the breadth of the claims encompasses the use of any reporter molecules and panel members in the method, whose relationship is not addressed by the specification.

4) The state of the prior art is such that library v library screening methods are not well known at the time the invention was made. The specification discloses the claimed method of screening library versus library using different libraries which are based upon a known compound (single

compound pair) and the enzyme is known to interact with the libraries compounds claimed. However, the enzyme (DHFR)or the libraries (random libraries of leucine zipper pair) neither encompass the breadth of the claimed subject matter, nor do they provide enabling method for the scope of the methods now claimed.

5) The art is inherently unpredictable, because it is not possible to predict with any certainty how to screen the libraries versus libraries without knowing the reaction or the activity between the protein or the libraries screened. The specification does not sufficiently teach how to test directly or indirectly for the protein activity.

Based upon the foregoing, it is concluded that an undue experimental burden is involved in method of identifying interacting set of molecules, the full scope of the claimed invention. Therefore, while it is true that the level of skill in the art is high, it would require undue experimentation to conduct the methods now claimed in the absence of guidance.

15. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

16. Claims 1, 3-4, 18-19, 21-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is vague and indefinite by reciting 'directly or indirectly detectable activity when Associated.' it is not clear what does applicants mean by directly or indirectly detectable activity, and it is not clear when associated with what the activity is detectable. Applicants are requested to clarify which activity is detectable directly or indirectly.

Claim 1 recites the limitation "said protein activity" in step E). There is insufficient antecedent basis for this limitation in the claim.

Claim 3 is vague and indefinite by reciting 'wherein at least one of said first panel' because claim has only one first panel. Applicants are requested to amend the claim.

Claim 18 recites the limitation "said protein reporter fragments". There is insufficient antecedent basis for this limitation in the claim.

Claims 1, 3-4 and 18-19, 21-24, 31-32 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the structural and functional relationship between the fragments of the protein reporter molecule and first, second panel of molecules, such that the activity is detected.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

18. Claims 1, 3-4 and 18-19, 21-24, 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Pelletier et al (Protein Engineering, 1997, vol. 10, page 89). (NOTE the instant claimed invention gets the priority date of provisional application 60/141,210 filing date 6/26/99.)

Pelletier et al disclose a protein complementation assay for detection of protein-protein interaction in vivo. The reference discloses a protein complementation assay based on reconstitution of DHFR activity. The reference discloses that the direct assay disclosed requires no additional endogenous factors for detecting specific protein-protein interactions. The reference discloses that DHFR is used as reporter enzyme, and GCN4 leucine zippers as model interacting proteins because of their association is well characterized. The reference in figure 1 discloses that the fragments of reporter molecules interaction with leucine zipper proteins (refers to the panel of molecules of the instant claims). The reference discloses that the method is useful in identifying protein-protein interactions. The reference specifically teaches that the method is applicable to screening cDNA libraries for the detection of unknown, specific protein-protein interactions. Thus, the reference clearly anticipates the claimed invention.

19. Claims 1, 3-4 and 18-19, 21-24, 31-32 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,270,964 (Michnick et al)

The applied reference has a common inventors (Michnick and Pelletier) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was

derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Michnick et al disclose protein fragment complementaion assay for the interaction of biological or drug interactions. The reference discloses that the assay can be used to screen cDNA libraries for binding of a target protein with unknown proteins or libraries of small organic molecules for biological activity. Figure 1 in the reference depicts the protein complementation assay. Figure 7 in the reference discloses the method of two semi-random leucine zipper libraries (refers to the panel of molecules of the instant claims) inserted at the N-terminal pf one of mDHFR fragments (refers to the fragments of the reporter molecule), and clones of interacting leucine zipper were identified. The reference discloses two semi-random leucine zipper libraries were created and each inserted N-terminal to one of the mDHFR fragments. The reference discloses that the cotrasformation of the resulting zipper-DHFR fragments libraries in E.coli and platting on selective medium allowed for survival of clones harboring successful interacting leucine zippers. Fourteen clones were isolated and the zippers were sequenced to identify the residues at "e" and "g" positions. The "e-g" pairs were categorized as attractive pair and repulsive pair (see column 9, lines 35 to 47). Example 7 of the reference further discloses the application of the PCA strategy to generate peptides with novel binding properties that may have therapeutic value using two leucine zipper libraries and fragments of mDHFR. Thus the reference clearly anticipates the claimed invention.

Double Patenting

20. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

21. Claims 1, 3-4,18-19, 21-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-41 of U.S. Patent No. 6,270,964 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reference claims are drawn to a method of detecting biomolecular interactions, and the method steps are same as the instant claimed method. The reference enzyme reporter molecule(species) refers to the protein reporter molecules (genus); other molecules of the reference refer to the panel of molecules of the instant claims; and the reference method

detects interaction between the enzyme fragments and other molecules, which would certainly would result in identifying the interacting set of molecules of the instant claims. Thus it would be obvious to one skill in the art to use the reference method to identify the interacting set of molecules.

Response to Arguments

22. Applicant's arguments with respect to claims 1, 3-4 and 18-19 and 21-33 have been considered but are moot in view of the new ground(s) of rejection.

23. Applicant's arguments filed on 1/21/04, regarding the priority date of the instant application have been fully considered but they are not persuasive.

Applicants argue that 'in view that this application has been granted CIP status from US serial No. 09/017,412....., there is sufficient guidance in the earlier filed application as to the selection of a reporter molecule as well as sufficient examples of the types of reporters that are desirable.

Applicant's assertions have been considered and are not persuasive. Even though the instant application is a CIP of US Patent application 09/017,412, the instant claimed invention does not get the filing date of the 09/017,412. In a continuation-in-part application, only claims directed solely subject matter adequately disclosed under 35 USC 112, first paragraph in the parent application is entitled to the benefit of the filing date of the parent application. Applicants have not shown in the parent application 09/017,412, the support for the claimed invention (library versus library screening for interacting molecules or sufficient guidance for the use of which reporter molecules and the panel of molecules). The specification of 09/017,412 discloses DHFR as reporter molecule (species of the genus of protein reporter molecules of the instant

claims), leucine zipper binding fragments (panel of molecules of the instant claims) in the claimed method, which does not support the broad genus of the claimed invention.

Applicants assertions that the US Patent application 09/017,412 discloses how to select the enzyme reporter molecules is not persuasive, since the instant claims are drawn to the use of protein reporter molecules which is broader than the enzymes of the '412 application. The priority of the instant claims 1, 3-4, 18-19, 21-24, and 31-32 is determined as the filing date of the provisional application 60/141,210 and thus the art rejections have been maintained.

Conclusion

24. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Padmashri Ponnaluri whose telephone number is 571-272-0809. The examiner is on Increased Flex Schedule and can normally be reached on Monday through Friday between 7 AM and 3.30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Padmashri Ponnaluri
Primary Examiner
Art Unit 1639

Pp
10 April 2004

PADMASHRI PONNALURI
PRIMARY EXAMINER